

ABSTRACT

A system used to interface between the drive stage of a unipolar spray dampening control system, and a bipolar valve. The system converts from an input, whose duty cycle is governed by pulse width modulation, to one in which the pulse width is constant and the frequency varied. If the duty cycle conversion is not required, the system can operate in follower mode which allows the converter outputs to follow the input frequency. Also disclosed is a method of controlling a magnetically actuated bistable valve. The method involves receiving a unipolar signal and converting the unipolar signal to a bistable signal. The bistable signal is then sent to a bistable valve causing it to shift from its current state to an opposite state. A state is either a closed or open valve position. The state can be switched again by reversing the current.